

Rec'd PCT/PTO 19 SEP 2005

Fig. 1

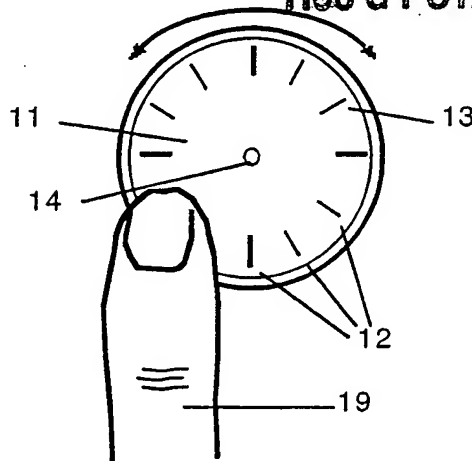


Fig. 2

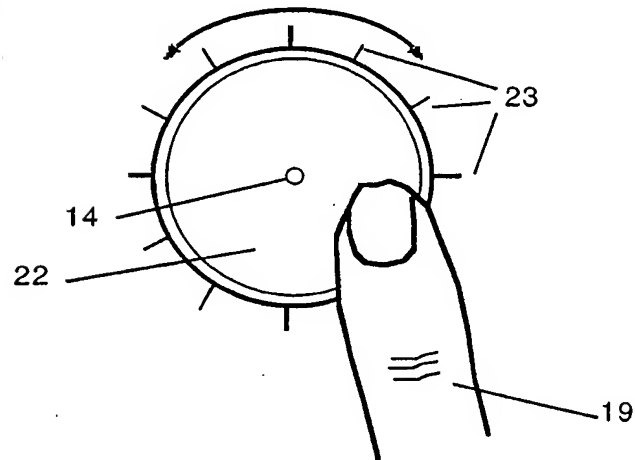


Fig. 3

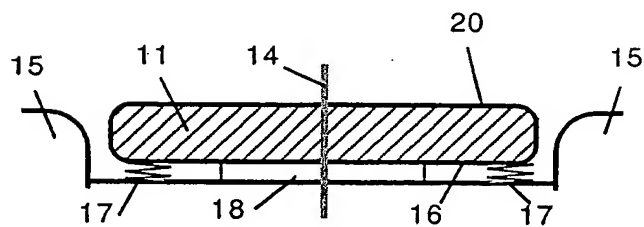
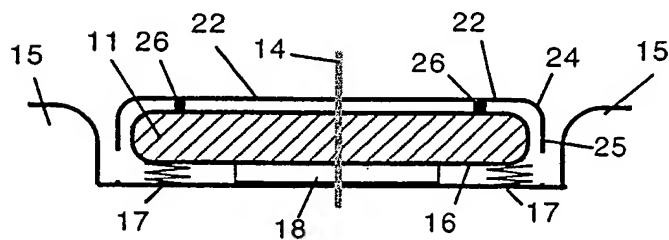


Fig. 4



10/526996

19 SEP 2005

Application No. : 10/526,996
Applicant(s) : Oliver VOELCKERS
Title : Operator Control Element for Electronic
Equipment Use for Actuating Sensors...

Attorney Docket : 101185-21

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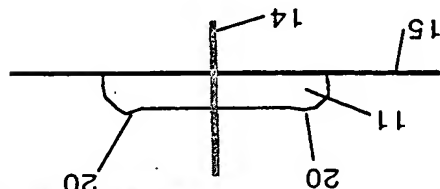


Fig. 5

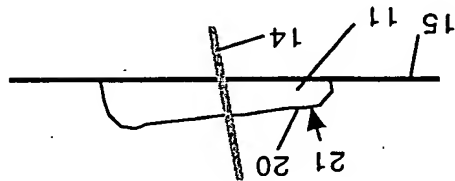


Fig. 6

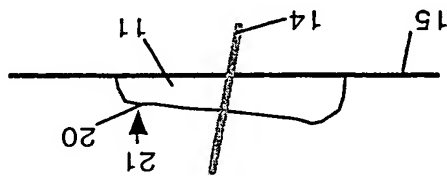


Fig. 7

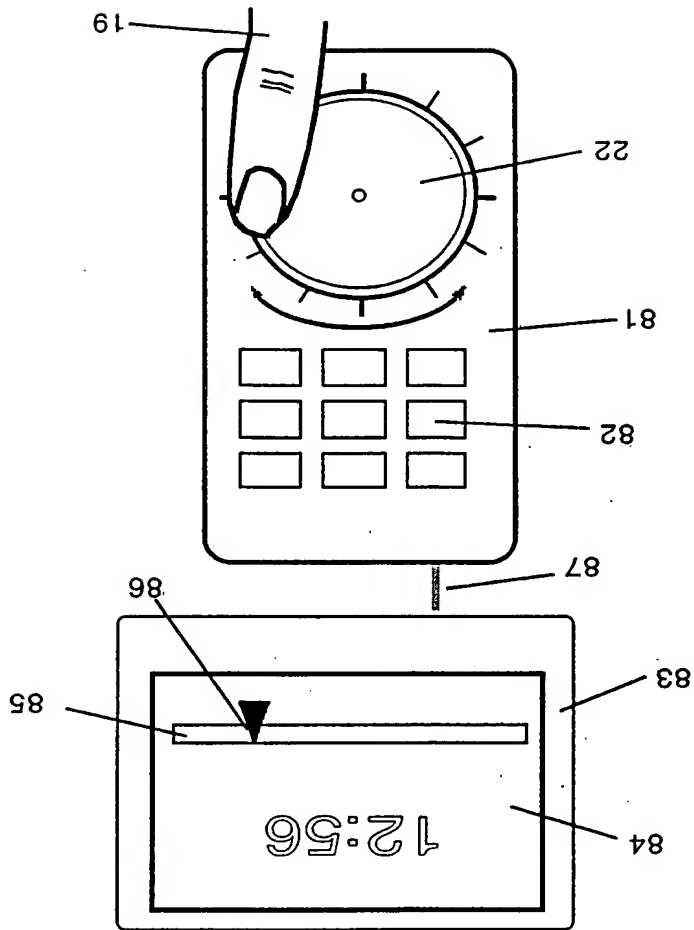


Fig. 8

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	Rotation detection	Tilt detection	Mechanical rotation	Mechanical tilt	Resolution of rotation	Resolution of tilt
Rotating disc with pulse generator	•	-	•	-	20-80	-
Joystick with force sensors	-	•	-	•	-	30-150
Cursor keys	-	•	-	•	-	1
Disc with capacitive sensor	•	-	-	-	50-200	1
Invention	•	•	- / •	•	10-100	2-100

Fig. 12

	Sensor Type	Number of Elements	Measure ment	Output	Reso- lution
	FSR cells	4	Force	analog	>50
	FSR linear pot. shaped like ring	1	Force + position	analog	>50
	Foil potentiometer shaped like ring	1	Position + contact area	analog	>200
	Strain gauges	4	Force	analog	>100
	Hall sensors	4	Distance	analog	>100
	Switch matrix with pattern recognition	2-30	Position + contact area	digital	5-100

Fig. 13

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Fig. 9

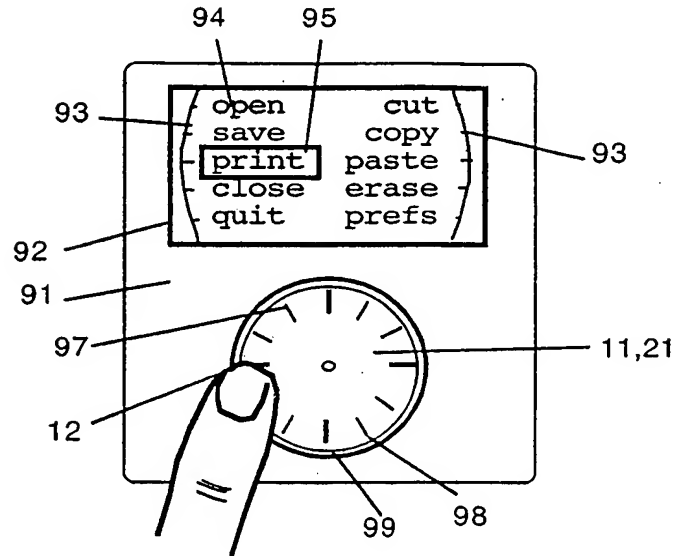


Fig. 10

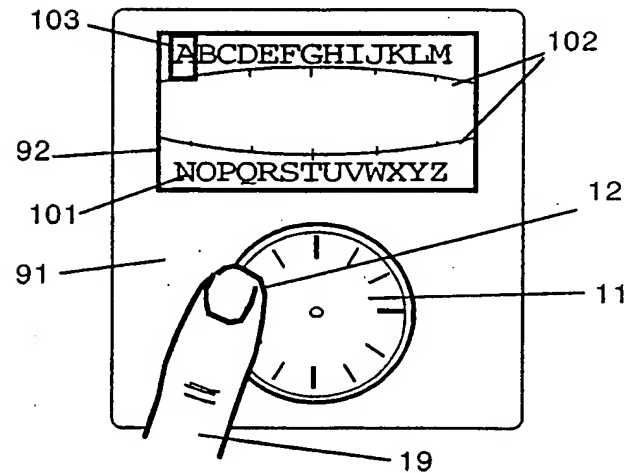


Fig. 11

